Bowling Green Lake #1

2011 DATA

Pike County
Latitude: 39.3417 Longitude: -91.1532

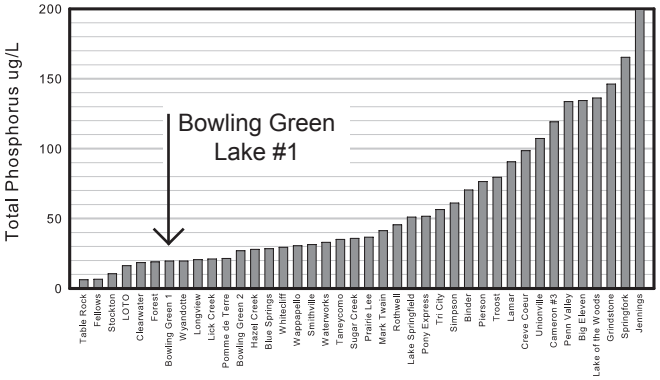
Date	5/11	5/18	6/29	7/22	8/9	8/29	9/20	Mean
Secchi (inches)								
TP (µg/L)	38	34	23	20	14	13	14	20
TN (µg/L)	610	470	500	430	370	360	340	432
CHL (µg/L)	6.5	3.1	13.1	6.3	2.6	1.1	4.6	4.2
ISS (mg/L)	6	2.8	0.6	0.5	0.5	0.4	1.5	1.1

Water quality in Bowling Green Lake #1 followed a predictable pattern of higher nutrients and suspended sediment values early in the season, with a general decline in concentrations as the season progressed. This pattern reflects the influence of watershed runoff during spring and the subsequent settling of sediment and nutrients over the course of summer.

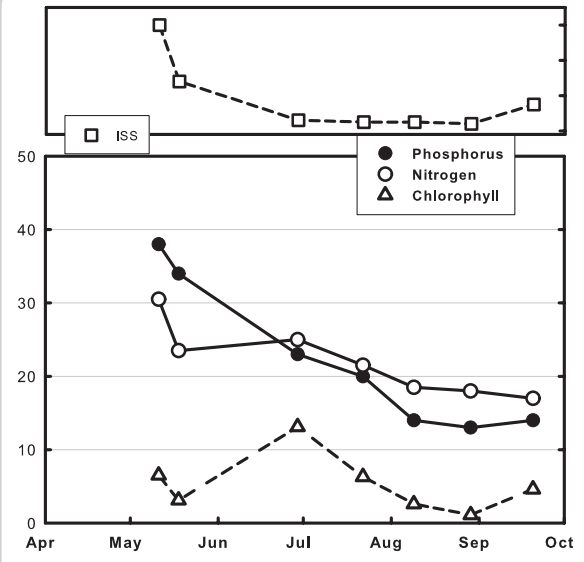
Algal chlorophyll showed moderate variability during the sample season, with no obvious pattern.

2011 was an average year for water quality at Bowling Green Lake #1. Concentrations of phosphorus and nitrogen were at or near the long-term mean values, while chlorophyll and suspended solides were slightly below the long-term mean values. No trends were apparent.

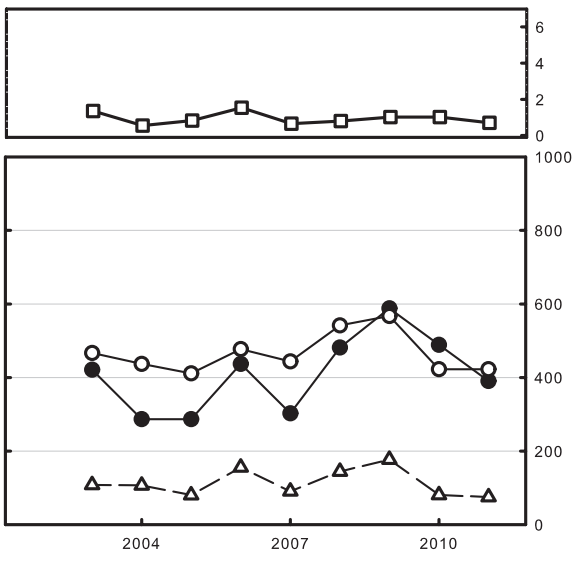
2011 Seasonal Mean Phosphorus Values



2011 GRAPHS



TREND GRAPHS



See page 3 for help interpreting graphs

Bowling Green Lake #2

Pike County
Latitude: 39.3436 Longitude: -91.1615

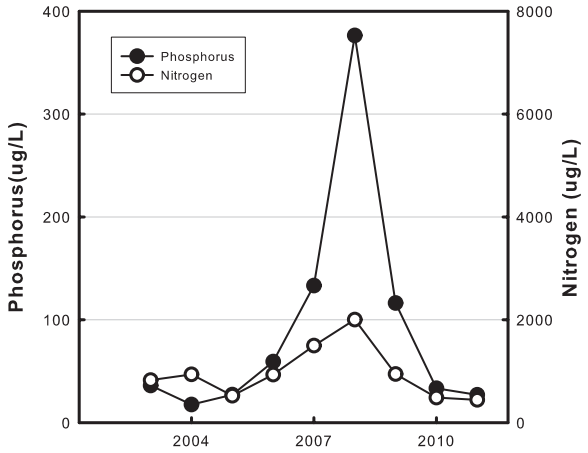
2011 DATA

Date	5/11	5/18	6/29	7/22	8/9	8/29	9/20	Mean
Secchi (inches)								
TP (µg/L)	42	24	50	22	26	21	32	29
TN (µg/L)	800	480	370	430	500	450	420	479
CHL (µg/L)	6.5	3.1	1.4	4.9	6.4	9.2	9	5.0
ISS (mg/L)	6	2.5	3.3	1	2.2	0.9	2.5	2.2

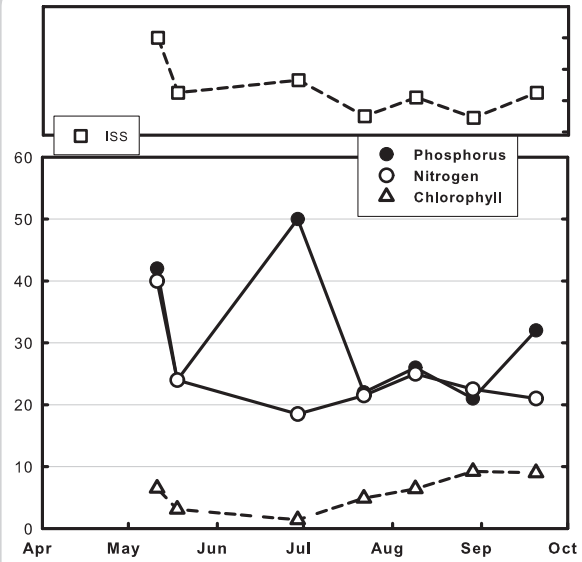
During 2011, Bowling Green Lake #2 had water quality that was similar to Bowling Green Lake #1. Lake #2 had only slightly higher concentrations of nutrients, chlorophyll and sediment.

Long-term data show that Lake #2 appears to have returned to normal following an extremely dramatic phosphorus and nitrogen spike during the years 2007-2009. During 2008, the summer mean phosphorus concentration was 376 µg/L and the mean nitrogen concentration was 2004 µg/L.

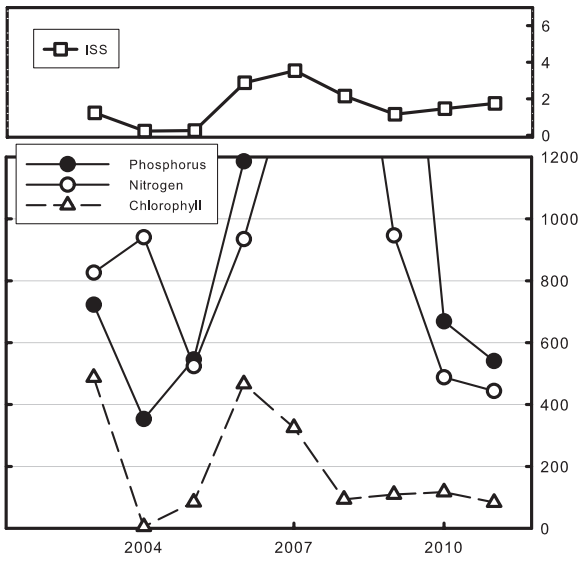
The seasonal and trend graphs share the same scale and the trend graph below omits the high values to maintain a useful scale for the seasonal data. The graph to the right shows phosphorus and nitrogen values with the y-axes expanded to show the full data scale.



2011 GRAPHS



TREND GRAPHS



See page 3 for help interpreting graphs